

**REMARKS**

Applicants have now had an opportunity to carefully consider the Examiner's comments set forth in the Office Action of October 5, 2004.

Reconsideration of the Application is requested.

**The Office Action**

**Claims 1, 3-8 and 11-19** remain in this application.

**Claims 1, 3-8, 11-14** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Fan (U.S. Patent No. 6,171,885).

**Claims 15-19** are allowed.

**The Art Rejections**

**Claims 1-8** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Fan (U.S. Patent No. 6,171,885).

**Claim 1** calls for among other elements: applying a first filter layer on at least a portion of the substrate inclusive of the non-sensor area to at least partially planarize the device.

AAPA discloses leaving the first filter layer in the first sensor area and etching out the filter from the rest of the substrate, including the non-sensor area. The second filter layer is left in the second sensor area and etched out from the rest of the substrate. AAPA teaches away from the Applicants concepts, by removing each filter layer immediately after application, from all areas except for an associated sensor area.

Fan discloses a fabrication of the imaging device in which a microlens formation precedes color filter layer formation. A transparent encapsulant is deposited to planarize the microlens. A first color layer is deposited over the planarizing layer.

The present application is directed to depositing the filter layers over the sensors. The filter layers also serve as planarizing layers when deposited over the non-sensor areas. Thus, the planarizing layer of claim 1 is also the first filter layer. In Fan, the planarizing layer is a separate layer which is deposited over all of the

device surface. The separate filter layers are deposited at a later time.

Neither AAPA, nor Fan, taken singularly or in combination, teaches or suggests depositing the filter layers over the non-sensor area to create the planar uniform device surface to deposit the filter layers of the same thickness over sensors positioned to form sensor areas. It is therefore respectfully submitted that **claim 1 and dependent claims 3-8** distinguish patentably and unobviously over AAPA and Fan.

**Claims 11-12** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Fan (U.S. Patent No. 6,171,885).

**Claim 11** calls for among other elements: applying a first filter layer on the substrate inclusive of a portion of the non-sensor area of the substrate to create a uniform surface to deposit a second filter layer of substantially uniform thickness over the photosensors, the non-sensor area being an area complimentary to each sensor area overlying each photosensor.

AAPA teaches contrary to the Applicants concepts to remove each filter layer immediately after application from all areas except for an associated sensor area.

Fan discloses depositing a transparent encapsulant to planarize the microlens. Color filter layers are deposited over the planarizing layer. Clearly, Fan teaches an additional planarizing layer, when the present application is directed to utilizing a filter layer as a planarizing layer.

Neither AAPA, nor Fan, taken singularly or in combination, teaches or suggests applying a filter layer over substrate, etching out the filter only from the unassociated sensor areas and leaving the filter layer on the non-sensor areas about the substrate periphery as a planarizing layer to assist in smooth distributing of additional filter layers over the substrate resulting in uniform filter layer application over sensors which are located at different distances from the point of filter distribution. It is therefore respectfully submitted that **claim 11 and dependent claim 12** distinguish patentably and unobviously over AAPA and Fan.

**Claims 13-14** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Fan (U.S. Patent No.

6,171,885).

**Claim 13** calls for among other elements: a first filter layer on the second sensor area and at least a portion of the first and second non-sensor areas to at least partially planarize the device; a second filter layer on the third sensor area, the second filter being applied over at least a portion of the substrate including the first and second non-sensor areas to at least partially planarize the device without removing the first filter layer from the non-sensor areas; and a third filter layer on the first sensor area, the third layer being applied over at least a portion of the substrate without removing at least one of the first and second filter layers from the non-sensor areas.

AAPA discloses leaving the first filter layer in the first sensor area and etching out the filter from the rest of the substrate, including the non-sensor area. The second filter layer is left in second sensor area and etched out from the rest of the substrate.

Fan discloses a fabrication of the imaging device in which a microlens formation precedes color filter layer formation. A transparent encapsulant is deposited to planarize the microlens. Color filter layers are deposited over the planarizing layer.

The present application is directed to depositing the filter layers over the sensors and adjacent areas for planarizing the device. Thus, the first filter layer of claim 13 serves as a planarizing layer. Likewise, the second filter layer of claim 13 serves as another planarizing layer. In Fan, the planarizing layer is a separate layer which is deposited over all device surface prior to depositing the separate filter layers. The filter layers do not serve as planarizing layers.

Neither AAPA, nor Fan, singularly or in combination, teaches or suggests depositing the filter layers over the non-sensor areas to create planar uniform device surface to uniformly deposit filter layers of substantially same thicknesses over sensors positioned at different distances from the center of the wafer. It is therefore respectfully submitted that **claim 13 and dependent claim 14** distinguish patentably and unobviously over AAPA and Fan.

**CONCLUSION**

For the reasons detailed above, it is submitted all claims remaining in the application (**Claims 1, 3-8 and 11-19**) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

No additional fee is believed to be required for this Amendment C. However, the undersigned attorney of record hereby authorizes the charging of any necessary fees, other than the issue fee, to Xerox Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Marina V. Zalevsky, at Telephone Number (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,  
MINNICH & McKEE, LLP

1/5/05

Date

M. Zalevsky

Mark S. Svat  
Reg. No. 34,261  
Marina V. Zalevsky  
Reg. No. 53,825  
1100 Superior Avenue, 7<sup>th</sup> Floor  
Cleveland, Ohio 44114-2579  
(216) 861-5582